

REMARKS

This Amendment is filed in response to the Office Action mailed on May 30, 2006. All objections and rejections are respectfully traversed.

Claims 1-10 are currently pending.

Response to Election/Restriction Requirement

In Applicant's response filed on January 3, 2006, Applicant only withdrew claims 11-26. Applicant did not withdraw claims 2-6 as Examiner believes. Claims 2-6 depend on claim 1, which is a generic claim. Claims 2-6 only further limit claim 1, where claim 1 is in the same category as claim 7.

Additionally, on page 2 of the Election/Restriction Requirement mailed on December 6, 2005, claims 2-6 were grouped in to group I with claims 1-10. Group I, classified claims 1-10 in class 429, subclass 22.

Accordingly, Applicant requests examination of claims 2-6.

Claim Rejections – 35 U.S.C. §103

At paragraph 1 of the Office Action, claims 1, 7, 8, and 10 were rejected under 35 U.S.C. §103 as being unpatentable over Bostaph et al., US Patent Application Publication No. 2002/0076589, published on June, 20, 2002, hereinafter Bostaph, in view of Barber, US Patent No. 6,443,717, issued on Sept. 3, 2002, hereinafter Barber.

Additionally, the present invention, as set forth in claim 1, comprises in part:

1. A fluid controlling assembly for use in a direct oxidation fuel cell, which fuel cell has an anode chamber and a cathode chamber, the assembly comprising:

an adjustable component at least a portion of which is disposed within the cathode chamber of the fuel cell, and said component, when adjusted, *regulates the rate at which fluids travel into and out of the cathode chamber of the fuel cell.*

By way of background, Bostaph discloses an anode side (first electrode 18) and a cathode side (second electrode 22) for use in a fuel cell system. The anode side and the cathode side are separated by a protonically conducting electrolyte membrane. The cathode side sits in a current collector 28 within cap portion 27. The anode side sits in a recess 24 within base portion 14. The fuel cell system uses a methanol concentration sensor for regulating the mixture of fuel sent to the anode side. The methanol concentration sensor communicates with the inlets of the methanol chamber and water chamber to maintain 0.5%-4% methanol in the mixture.

Barber describes a variable valve timing approach to control air flow from compressors and expanders in a fuel cell. The system uses a rotating disc that contains slots, which are either aligned with the ports to connect or block the connection of the port, thereby allowing or blocking the flow of air into the fuel cell.

Applicant respectfully urges that there is no suggestion of the combination of Bostaph and Barber because Bostaph does not suggest *an adjustable component at least a portion of which is disposed within the cathode chamber.* Bostaph discloses a sensor controlling the input from the water tank and the methanol take to regulate fuel mixture

to the anode. Barber discloses a variable valve timing to regulate the flow of air from compressors and expanders in a fuel cell. Based on the teachings of Bostaph and Barber, one of ordinary skill in the art would not combine Barber with Bostaph because there is no suggestion of the combination because Barber regulates the air flow and not the fuel. Additionally, there is no suggestion in Bostaph of regulating the fuel sent to the anode only the concentration of methanol in the water.

Additionally, Applicant respectfully urges that Bostaph and Barber taken alone or in combination do not teach Applicant's claimed novel *an adjustable component ...regulates the rate at which fluids travel into and out of the cathode chamber of the fuel cell*. In further detail, Applicant's claimed invention describes an adjustable component that regulates the rate at which fluids travel into and out of the *cathode chamber*. There is no description or suggestion in Bostaph of such an adjustable component in a cathode chamber, or elsewhere in the fuel cell. Furthermore, there is no suggestion of regulating fluids in Bostaph traveling into and/or out of the cathode chamber, only concentration of methanol in the fuel is regulated. Additionally, Bostaph discloses regulating fuel concentration to the anode, but does not teach or suggest regulating the flow of fluid into and out of the cathode using *an adjustable component*.

Barber does not disclose using *an adjustable component* to regulate fluids into and out of the cathode. In contrast, Barber is directed to regulating the flow of air in compressors and expanders of a fuel cell. There is no suggestion in Barber of regulating the flow of other fluids such as water, to/from a cathode. For example, in Applicant's Specification at Page 6, lines 25-28, it is stated that: "In a closed position, the shutters

maintain water in the cathode chamber. When in an open position, air can enter the fuel cell and water vapor can escape.” Barber contains no such suggestion of fluids traveling into and out of the cathode chamber.

Accordingly, Applicant respectfully urges that the Bostaph patent and the Barber patent, taken alone or in combination, are legally insufficient to render the presently claimed invention obvious under 35 U.S.C. § 103 because of the absence in the cited patents of Applicant’s claimed novel *an adjustable component ...regulates the rate at which fluids travel into and out of the cathode chamber of the fuel cell.*

At paragraph 2 of the Office Action, claims 9 was rejected under 35 U.S.C. §103 as being unpatentable over Bostaph, in view of Barber, and in further view of Reynolds et al., US Patent No. 5,985,475, hereinafter Reynolds.

Applicant respectfully notes that claim 9 is a dependent claim that depends from an independent claim believed to be in condition for allowance. Accordingly, claim 9 is believed to be in condition for allowance.

All independent claims are believed to be in condition for allowance.

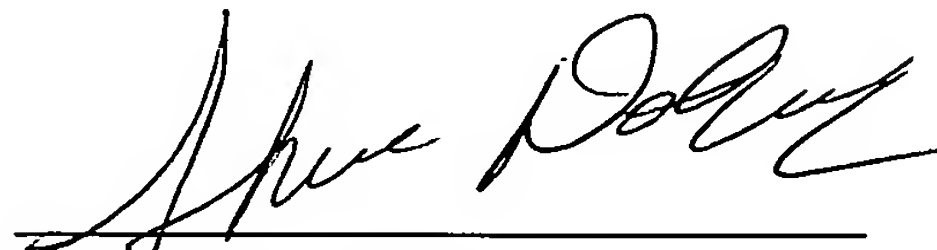
All dependent claims (including claims 2-6) are dependent from independent claims which are believed to be in condition for allowance. Accordingly, all dependent claims are believed to be in condition for allowance.

Favorable action is respectfully solicited.

Please charge any additional fee occasioned by this paper to our Deposit Account

No. 03-1237.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Shannen C. Delaney", written over a horizontal line.

Shannen C. Delaney

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